ELSEVIER

Nuclear Engineering and Design 178 (1997) 339–340

Nuclear Engineering and Design

CONTENTS OF ISSUE 178 (1)

Materials Engineering

Artificial neural networks in prediction of mechanical behavior of concrete at high temperature
A. Mukherjee and S. Nag Biswas 1

Thermal-Hydraulics, Safety and Risk Analysis

Simulation and analysis of transient cooldown natural convection experiments
R.R. Nourgaliev, T.N. Dinh and B.R. Sehgal 13

Heat transfer modeling in the vertical tubes of the passive containment cooling system of the simplified boiling water reactor
L.E. Herranz, J.L. Muñoz-Cobo and G. Verdú 29

AHMED experiments on hygroscopic and inert aerosol behaviour in LWR containment conditions: experimental results
J.M. Mäkynen, J.K. Jokiniemi, P.P. Ahonen, E.I. Kauppinen and R. Zilliacus 45

Annular flow entrainment rate experiment in a small vertical pipe
M.A. Lopez de Bertodano, C.-S. Jan and S.G. Beus 61

Implementation and assessment of improved models and options in TRAC-BF1
G.T. Analytis 71

Fuel Engineering

Defuelling of the UTR-300 research reactor
R.D. Scott, H.M. Banford, B.W. East, M.A. Ord and A.P. Gaffka 99

Highly enriched uranium recycle and conversion facility at COGEMA Pierrelatte
S. Bouchardy and J.F. Pauty 107

Thermal compatibility of centrifugally atomized U–Mo powders with aluminium in a dispersion fuel
K.H. Kim, D.B. Lee, C.K. Kim, G.L. Hofman and K.W. Paik 111

Development of very-high-density low-enriched-uranium fuels
J.L. Snelgrove, G.L. Hofman, M.K. Meyer, C.L. Trybus and T.C. Wiencek 119

Reactor Engineering

FRM-II: The new German research reactor
A. Axmann, K. Böning and M. Rottmann 127

Techniques for CAD reconstruction of 'as-built' environments and application to preparing for dismantling of plants
J. Pot, G. Thibault and P. Levesque 135

PII S0029-5493(97)00323-3

Technical note
Local damage assessment of turbine missile impact on composite and multiple barriers
A.M. Amde, A. Mirmiran and T.A. Walter 145

Announcement 157
Instructions to Contributors 159

CONTENTS OF ISSUE 178 (2)
Preface
F.C. Cesari 163
Displacement estimates of pipe elbows prior to plastic collapse loads
R.J. Jospin 165
A model for plastic hinges in tubular beams impact
V.E. Sonzogni 179
Modified solution of radial nozzle with thick reinforcement in spherical vessel head subjected to radial load
Y.-S. Lee and Y.-S. Sohn 185
Integrity of the blowdown piping systems in a nuclear power plane—findings and consequences
J. Jansky and M. Langenstein 195
Structural evaluation of thermal stratification for PWR surge line
Y.J. Yu, S.H. Park, G.H. Sohn and W.J. Bak 211
OFF-LINE system for determination of the residual life of vessels by experts
S. Vejvoda and D. Vincour 221

Instructions to Contributors 231

CONTENTS OF ISSUE 178 (3)
The investigation of turbulence characteristics in an internally-heated unstably-stratified fluid layer
R.R. Nourgaliev and T.N. Dinh 235
Viscosities of corium–concrete mixtures
J.M. Seiler and J. Ganzhorn 259
Corium viscosity modelling above liquidus temperature
F. Sudreau and G. Cognet 269
Non-linear dynamics of a two phase flow system in an evaporator: The effects of (i) a time varying pressure drop (ii) an axially varying heat flux
S. Narayanan, B. Srinivas, S. Pushpavanam and S. Murty Bhallamudi 279
Quantitative prediction of natural circulation in an LMFR with a similarity law and a water test
Y. Eguchi, H. Takeda, T. Koga, N. Tanaka and K. Yamamoto 295
Approximate functions for the fast computation of the thermodynamic properties of heavy water
A. Durmayaz 309

Technical note
An independent assessment of Groeneveld et al.'s 1995 CHF look-up table
W.-P. Baek, H.-C. Kim and S. Heung Chang 331

Contents of Volume 178 339
Author Index of Volume 178 341
Subject Index of Volume 178 343
Instructions to Contributors 345